



November 13, 2007

Maureen Gorsen, Director
Department of Toxic Substances Control
1001 I Street
Sacramento, CA 95814

Subject: Chemical Policy Recommendations for Cal-EPA's Green Chemistry Initiative

Dear Director Gorsen:

The Bromine Science and Environmental Forum (BSEF) is pleased to offer the following recommendations to the California Department of Toxic Substances Control (DTSC) for your consideration in developing and implementing the Cal-EPA Green Chemistry Initiative.

BSEF is a scientific and advocacy organization composed of four major producers of a variety of chemical, agricultural, industrial and consumer products, including brominated and non-brominated flame retardants. BSEF and its member companies Albemarle Corporation, Chemtura Corporation, Israeli Chemicals Limited and Tosoh fund and commission original scientific research and analysis, often at the request of government organizations and agencies, to further public understanding of brominated flame retardants and related products. BSEF and its member companies are committed to producing safe and effective flame retardants in a manner that is protective of human health and the environment so that the life saving benefits of these products can be maintained. BSEF is also committed to being a leading source of research and information to consumers of products containing bromine and brominated flame retardants.

Summary:

The guiding principle for this proposal is that it relies on successful management of chemicals already in the marketplace according to their characteristics and actual uses, rather than simply banning substances. This focus recognizes the important difference between risk and hazard, i.e., that hazardous substances properly managed may not pose actual risks, and would create a system that is based on successful management of identified risks, as opposed to establishing prohibitions based on potential hazard.



Under such an approach, prohibitions would be put in place only when an unacceptable level of risk is identified that cannot be adequately mitigated or that is not offset by the aggregate benefits of continued use. This approach is science-based, and relies on data generated through experimentation or by means of modeling (structure-activity relationships).

This proposal addresses existing chemicals, but we believe a similar, risk based approach can be taken for new chemicals.

Data Submission and Substance Classification:

By January 1, 2010, producers or importers of chemicals with annual sales volume in excess of 1 million pounds (corresponding to the primary threshold specified in USEPA's High Production Volume Challenge program), will provide Cal-EPA with a self-certified assessment specifying whether the chemical should be considered:

- Persistent, bio-accumulative and toxic (PBT);
- Very persistent and very bio-accumulative (vPvB); or.
- To have significant possibility of being carcinogenic, mutagenic, or a reproductive toxin (CMR category 2).

These self-certified assessments shall be made using recognized global regulatory standards, and the data and rationale behind each the assessment shall accompany the submission. Comparable submittals made in other jurisdictions, such as the European Union, should be considered equivalent for purposes of this requirement.

- The submission will be reviewed by Cal-EPA and final determination of the chemical's classification will lie with Cal-EPA. Materials that are not classified will be given unrestricted approval for continued use.

Risk Assessment and Peer Review:

Materials which are classified as PBT, vPvB, or CMR category 2 will be subject to an environmental and human health risk assessment for specific applications.

- The producer or importer of the chemical, or downstream users, will be responsible for conducting the risk assessment using procedures specified by Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA) and subject to review and approval by OEHHA. This process should encourage collaboration between affected industry groups and the University of California or other academic, governmental or private institutions.



- Once the risk assessment is deemed complete by OEHHA, it will be peer reviewed by an expert panel convened by Cal-EPA.

Application of Risk Assessment Results:

If the risk assessment shows that there is no need for risk reduction measures in a particular application to ensure protection of human health and the environment (i.e., **no** significant risk is identified), the substance will be approved for use in that application.

If the risk assessment shows a need for risk reduction to ensure protection of human health and the environment (i.e., a significant risk **is** identified), the producer or importer of the chemical, or downstream users, will submit a plan to the Department of Toxic Substances Control (DTSC) detailing how an acceptable risk level can be achieved and maintained.

- Once appropriate risk reduction measures have been evaluated and approved by DTSC, a time frame for implementation will be set.
 - Successful implementation of risk reduction measures will result in ongoing approval for use of the substance in that specific application.
 - If a suitable risk management program can not be agreed upon or implemented within acceptable time frame, then the substance will be prohibited from further use in that application.

Phased Implementation:

The program will be progressively expanded to lower-volume substances over succeeding years. It is proposed that submissions for all substances with annual sales volumes in excess of 500,000 pounds will be made by January 1, 2015, and for all substances in with annual sales in excess of 100,000 pounds by January 1, 2018.



BSEF appreciates your consideration of our recommendations and we look forward to further dialogue with DTSC and Green Chemistry Initiative stakeholders as you work toward developing final policy recommendations in 2008. If you have any questions, please do not hesitate to contact Ray Dawson of Albemarle Corporation at ray_dawson@albemarle.com.

Sincerely,

A handwritten signature in black ink, which appears to read "M. Spiegelstein". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Spiegelstein, PhD.
Chairman
BSEF

Cc: Linda Adams, Cal-EPA
Jeff Wong, DTSC
Margaret Graham, DTSC